



January 13, 2023

Via electronic mail

LDEQ, Public Participation Group
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Re: Public Comments- Draft Hazardous Waste Operating Renewal Permit, Clean Harbors Colfax, LLC
LAD 981055791-OP-RN-2
AI#32096/PER 20170002

On behalf of Central Louisiana Coalition for a Clean & Healthy Environment, and the Louisiana Environmental Action Network, Earthjustice submits these comments concerning the above-referenced draft hazardous waste permit (“draft permit”) for Clean Harbors Colfax LLC (“Clean Harbors”), located at 3763 Louisiana Highway 471, Colfax, Louisiana. As detailed below, the draft permit must be denied because it fails to comply with applicable hazardous waste laws that are necessary to protect communities and the environment from the toxic pollution associated with Clean Harbors’ hazardous waste burning.

I. BACKGROUND CONCERNING CLEAN HARBORS’ OPERATIONS

A. General Facility and Community Overview.

Clean Harbors is a commercial facility in Grant Parish, Louisiana that receives and burns hazardous wastes from private facilities and U.S. government sites all across the country.¹ Since 1993, this facility has operated with a hazardous waste storage, treatment, and disposal permit that allows it to open burn and open detonate (OB/OD) hundreds of thousands of pounds of these hazardous wastes into the air every year.

¹ Among the private facilities from which Clean Harbors Colfax receives hazardous wastes are Lockheed Martin, Disneyland/Disneyworld/Universal Studios, Boeing, BAE Systems, Aerojet Rocketdyne, and more. EPA, Biennial Reporting System Database, 2019 BR Facility Summary Report for Clean Harbors Colfax LLC, https://enviro.epa.gov/enviro/brs_report_v2.get_data?hand_id=LAD981055791&rep_year=2019&naic_code=&naic_code_desc=&yvalue=2019&mopt=0&mmopt=&wst_search=0&keyword1=&keyword2=&keyword3=&rvalue1=&rvalue2=&rvalue3=&cvalue1=&cvalue2=&cvalue3= [archived at <https://perma.cc/7TL8-PNY5>].

According to 2020 census data, 1,428 people reside in the town of Colfax.² The population is predominately (59%) African-American.³ Nearly half (45%) of the town's residents live in poverty, and the median household income is \$20,139.⁴ Further, of the 3,529 people living within a five-mile radius of the facility, 50% are people of color and 60% are low-income.⁵

B. Toxic Pollution from Hazardous Waste Burning.

The draft permit allows for OB/OD and operation of a “contained burn chamber system,” (“CBCS”) both of which will burn significant amounts of a wide range of hazardous wastes. Both operations will emit harmful pollutants that put the environment and people's health at risk.

The draft permit allows Clean Harbors to burn (through OB/OD and CBCS operations) various types of hazardous wastes, including, for instance: arsenic (D004); lead (D008); chromium (D007); hexachlorobenzene (D032); explosives manufacturing waste (K044 and K045); nitroglycerine (P081); and acute hazardous wastes from discarded commercial chemical products (P-wastes).⁶ Some of the other wastes represented by the waste codes in the draft permit include airbag detonators, flares, propellants, ammunition, smokeless powders, and Royal Demolition Explosive (RDX).⁷

Clean Harbors' own sampling conducted over the past decade has shown that there are a variety of contaminants in the soil, sediment, and groundwater.⁸ For instance, recent monitoring reports show that perchlorate has been detected in the soil, sediment, and groundwater.⁹ RDX and High

² U.S. Census Bureau, 2020 Decennial Census Redistricting Data, *Table P1 – Race for Colfax Town, Louisiana*, <https://data.census.gov/table?g=1600000US2216375&tid=DECENNIALPL2020.P1>.

³ *Id.*

⁴ U.S. Census Bureau, 2020 5-Year ACS Estimates, *Table S1901 – Income in the Past 12 Months for Colfax Town, Louisiana*, <https://data.census.gov/table?g=1600000US2216375&tid=ACSST5Y2020.S1901>; U.S. Census Bureau, 2020 5-Year ACS Estimates, *Table S1701 – Poverty Status in the Past 12 Months for Colfax Town, Louisiana*, <https://data.census.gov/table?g=1600000US2216375&tid=ACSST5Y2020.S1701>.

⁵ EPA, 2022 EJScreen, EJScreen Report and ACS Summary Report for Five-mile Radius Surrounding Clean Harbors, <https://ejscreen.epa.gov/mapper/> (five-mile ring centered at latitude/longitude of 31.572670, -92.712973) (attached as Exhibits 1 and 2). A radius of at least five-miles is appropriate – in contrast to the three-mile radius used by LDEQ – because it is known that the kinds of pollutants released by Clean Harbors' hazardous waste open burning travel many miles.

⁶ Clean Harbors Colfax, Draft Hazardous Waste Operating Renewal Permit at 14 (Table 2), 30 (Table 6) (Nov. 2022), EDMS Doc. No. 13516583, <https://edms.deq.louisiana.gov/app/doc/view?doc=13516583> (hereinafter “Draft Permit”).

⁷ *Id.*

⁸ See, e.g., Clean Harbors Colfax, Third Quarter 2022, Tier I Detection Monitoring Report at 1, 5-7 (pdf p. 4, 8-10) (Nov. 21, 2022), EDMS Doc. No. 13572332, <https://edms.deq.louisiana.gov/app/doc/view?doc=13572332>; Clean Harbors Colfax, Third Quarter 2022 Groundwater Sampling Event Report at 4-5 (pdf p. 7-8) (Nov. 21, 2022), EDMS Doc. No. 13571970, <https://edms.deq.louisiana.gov/app/doc/view?doc=13571970>.

⁹ Third Quarter 2022, Tier I Detection Monitoring Report at pdf p. 102 (Table 3) (Nov. 21, 2022), EDMS Doc. No. 13572332; Third Quarter 2022 Groundwater Sampling Event Report at pdf p. 22-36 (Table 3) (Nov. 21, 2022), EDMS Doc. No. 13571970. See also Abrahm Lustgarten, “Kaboom Town,”

Melting Explosive (HMX)¹⁰ were also detected in the groundwater and lead was detected in the soil at levels exceeding the screening standard.¹¹ Also, sampling from 2016 showed exceedances of regulatory and/or environmental standards for: (1) concentrations of methyl chloride and lead in soil/sediment samples; (2) concentrations of perchlorate in surface water; and (3) concentrations of arsenic, chromium, lead, perchlorate, and RDX in groundwater.¹²

The hazardous pollutants involved in Clean Harbors' OB/OD operations and its planned use of the CBCS present serious human health and environmental risks. For example, RDX is classified as a possible human carcinogen that can damage the nervous system and cause seizures, nausea, and vomiting.¹³ There is limited information regarding the health effects of HMX, but animal studies have shown that it is harmful to the liver and central nervous system.¹⁴ Also, RDX and HMX both readily move from soil into groundwater and, thus, have the potential to contaminate drinking water sources.¹⁵ HMX in dust particles can also be carried by the wind for long distances.¹⁶

In addition, heavy metals found in sampling throughout the years, including lead, arsenic, and chromium, are known to harm human health.¹⁷ Lead, for example, is a potent neurotoxin that accumulates in the body and is toxic to many bodily systems and organs, including the cardiovascular system, the blood (thus, causing conditions like anemia), the kidneys, the nervous system (thus, producing symptoms such as headache, lethargy, muscle weakness, tremors, and paralysis), and the reproductive system.¹⁸ There is no safe level of exposure to lead and even

ProPublica (July 21, 2017), <https://www.propublica.org/article/military-pollution-toxic-burns-colfax-louisiana> (attached as Exhibit 3).

¹⁰ RDX and HMX are both explosive compounds that are used to conduct OB/OD operations and thus, are often found at military sites where OB/OD occurs or has previously occurred. EPA, Technical Fact Sheet – Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) at 1 (Aug. 2021), https://www.epa.gov/sites/production/files/2017-10/documents/ffrro_ecfactsheet_rdx_9-15-17_508.pdf; Agency for Toxic Substances and Disease Registry (“ATSDR”), HMX at 1 (Sept. 1997), <https://www.atsdr.cdc.gov/toxfaqs/tfacts98.pdf>.

¹¹ Third Quarter 2022 Groundwater Sampling Event Report at pdf p. 22-36 (Table 3) (Nov. 21, 2022), EDMS Doc. No. 13571970; Third Quarter 2022, Tier I Detection Monitoring Report at 13 (pdf p. 16) (Nov. 21, 2022), EDMS Doc. No. 13572332; *See also* Lustgarten, “Kaboom Town,” ProPublica (July 21, 2017).

¹² LDEQ, Consolidated Compliance Order & Notice of Potential Penalty, Enforcement Tracking No. MM-CN-16-01015, at 4-5 (pdf p. 6-7) (Oct. 27, 2016), EDMS Doc. No. 10386166, <https://edms.deq.louisiana.gov/app/doc/view?doc=10386166>.

¹³ EPA, Technical Fact Sheet – Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) at 1-3 (Aug. 2022), https://www.epa.gov/sites/production/files/2017-10/documents/ffrro_ecfactsheet_rdx_9-15-17_508.pdf.

¹⁴ ATSDR, HMX at 2 (Sept. 1997), <https://www.atsdr.cdc.gov/toxfaqs/tfacts98.pdf>.

¹⁵ *Id.* at 1; EPA, Technical Fact Sheet – Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) at 3 (Aug. 2022), https://www.epa.gov/sites/production/files/2017-10/documents/ffrro_ecfactsheet_rdx_9-15-17_508.pdf.

¹⁶ ATSDR, HMX at 1 (Sept. 1997), <https://www.atsdr.cdc.gov/toxfaqs/tfacts98.pdf>.

¹⁷ *See, e.g.*, Third Quarter 2022, Tier I Detection Monitoring Report at pdf p. 76-101 (Table 2) (Nov. 21, 2022), EDMS Doc. No. 13572332.

¹⁸ World Health Organization (“WHO”), *Lead Poisoning and Health* (Aug. 31, 2022), <https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health>.

very low blood lead levels have been linked to neurological damage in children.¹⁹ Arsenic is classified as a known human carcinogen by the International Agency for Research on Cancer and the National Toxicology Program.²⁰ Arsenic compounds can cause lung, bladder, skin, kidney, liver, and prostate cancers.²¹ Arsenic is known to be toxic to the cardiovascular system, the blood, and the nervous system.²² Chromium is also a human carcinogen that can harm the nose and skin, cause breathing problems, and result in irritation and ulceration of the stomach and intestines.²³

Dioxins, which are formed during combustion, bioaccumulate in the ecosystem and in the human body because of their chemical stability and the fact that they are absorbed by fat tissue.²⁴ Dioxins and furans are known as persistent organic pollutants (“POPs”) due to “their highly toxic potential” and their impact on numerous organs and body systems.²⁵ Short-term exposure can result in skin lesions and liver damage and long-term exposure is “linked to impairment of the immune system, the developing nervous system, the endocrine system and reproductive functions.”²⁶ In addition, animal studies have shown that exposure to dioxins/furans can result in cancer.²⁷

Perchlorate, the main ingredient in propellant, can impact the uptake of iodine in the thyroid gland, thus interfering with thyroid function and negatively impacting metabolism and fetal and infant brain development and growth.²⁸ Short-term exposure to high doses can cause “eye and skin irritation, coughing, nausea, vomiting, and diarrhea.”²⁹

TNT (2,4,6-trinitrotoluene) is also open burned by Clean Harbors and will be treated in the CBCS.³⁰ TNT is used extensively in the manufacture of munitions and thus, accounts for a large

¹⁹ See, e.g., Enrico Rossi, *Low Level Environmental Lead Exposure – A Continuing Challenge*, 29 Clin. Biochem. Rev. 63, 64 (May 2008), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2533151/> (meta-review of the literature regarding blood lead levels that confirmed that the “adverse consequences of lead exposure have no discernible blood lead threshold”).

²⁰ American Cancer Society, *Arsenic and Cancer Risk* (last revised Aug. 5, 2020), <https://www.cancer.org/cancer/cancer-causes/arsenic.html>.

²¹ *Id.*

²² ATSDR, *What are the Physiologic Effects of Arsenic Exposure?* (last reviewed Jan. 15, 2010), https://www.atsdr.cdc.gov/csem/arsenic/physiologic_effects.html.

²³ ATSDR, *Chromium – ToxFAQs at 1* (Oct. 2012), <https://www.atsdr.cdc.gov/toxfaqs/tfacts7.pdf>.

²⁴ WHO, *Dioxins and Their Effects on Human Health* (Oct. 4, 2016), <https://www.who.int/news-room/fact-sheets/detail/dioxins-and-their-effects-on-human-health>.

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

²⁸ GAO, GAO-07-1042T, *Department of Defense Activities Related to Trichloroethylene, Perchlorate, and Other Emerging Contaminants: Hearing Before the Subcomm. on Readiness, Comm. on Armed Services*, 110 Cong. at 7, 9 (July 2007) (Statement of John B. Stephenson), <https://www.gao.gov/new.items/d071042t.pdf>.

²⁹ EPA, *Technical Fact Sheet – Perchlorate at 1*, 3 (Jan. 2014), https://www.epa.gov/sites/production/files/2014-03/documents/ffirofactsheet_contaminant_perchlorate_january2014_final.pdf.

³⁰ Draft Permit at 14 (Table 2), 40 (Table 6).

share of the explosives contamination at OB/OD sites.³¹ TNT is classified as a possible human carcinogen and can damage the liver and blood systems.³² Long-term exposure can also lead to skin irritation and the development of cataracts.³³

Volatile organic compounds (“VOCs”) are also emitted during OB/OD operations and can cause a range of health issues depending on the specific compound and the level of exposure. For instance, benzene is a VOC that is a known carcinogen and can cause leukemia.³⁴ Benzene exposure can also negatively impact the immune system—increasing risk of infection—and harm bone marrow—decreasing red blood cells and resulting in anemia.³⁵ In addition, polycyclic aromatic hydrocarbons (“PAHs”) are formed whenever substances are burned. Exposure to PAHs can cause cancer and animal studies have shown increased rates of skin, lung, bladder, liver, and stomach cancers.³⁶ PAHs tend to stick to solid particles like soil but some PAHs move through soil to contaminate groundwater.³⁷

Further, the draft permit lists additional hazardous wastes that were not included in the prior permit. These wastes include:

- Chloroform (D022): Exposure to chloroform can cause central nervous system depression and negative impacts to the liver.³⁸ Chloroform is considered a probable human carcinogen.³⁹
- 1,1-Dichloroethylene (D029): Exposure to this chemical is associated with central nervous system depression, and animal studies have shown that chronic exposure can impact the liver, kidneys, and lungs.⁴⁰
- Hexachlorobenzene (D032): Hexachlorobenzene is considered a probable human carcinogen.⁴¹ Exposure can cause damage to the nervous system, reproductive system,

³¹ EPA, Technical Fact Sheet – 2,4,6-Trinitrotoluene (TNT) at 1 (Aug. 2021), https://www.epa.gov/sites/production/files/2017-10/documents/ffrrofactsheet_contaminants_tnt_9-15-17_508.pdf.

³² *Id.* at 1-3.

³³ *Id.* at 2-3.

³⁴ ATSDR, Benzene – ToxFAQs at 2 (Aug. 2007), <https://www.atsdr.cdc.gov/toxfaqs/tfacts3.pdf>.

³⁵ *Id.* at 1.

³⁶ ATSDR, Case Studies in Environmental Medicine, Toxicity of Polycyclic Aromatic Hydrocarbons (PAHs) at 34 (July 1, 2009), <https://www.atsdr.cdc.gov/csem/pah/docs/pah.pdf>.

³⁷ ATSDR, Polycyclic Aromatic Hydrocarbons (PAHs) – ToxFAQs at 1 (Sept. 1996), <https://www.atsdr.cdc.gov/toxfaqs/tfacts69.pdf>.

³⁸ EPA, Chloroform at 1-2 (Sept. 2016), <https://www.epa.gov/sites/default/files/2016-09/documents/chloroform.pdf>.

³⁹ *Id.* at 1-3.

⁴⁰ EPA, Vinylidene Chloride (1,1-Dichloroethylene) at 1-2 (Sept. 2016), <https://www.epa.gov/sites/default/files/2016-09/documents/vinylidene-chloride.pdf>.

⁴¹ EPA, Hexachlorobenzene at 1-2 (Sept. 2016), <https://www.epa.gov/sites/default/files/2016-09/documents/hexachlorobenzene.pdf>.

liver, and thyroid.⁴² Further, because hexachlorobenzene accumulates in body fat, long-term exposure “may be more serious than acute or short-term exposure.”⁴³

- Hexachloroethane (D034): Hexachloroethane is considered a possible human carcinogen and exposure to it is associated with central nervous system depression, damage to the liver and kidneys, and irritation of the mucus membranes.⁴⁴
- Nitrobenzene (D036): Exposure to nitrobenzene has adverse impacts on the blood and the respiratory, hepatic, renal, and reproductive systems.⁴⁵ Specifically, nitrobenzene is known to be a male reproductive toxicant.⁴⁶
- Pyridine (D038): Exposure to pyridine can cause damage to the liver, as well as “neurological effects, renal effects, and irritation of the skin and eye.”⁴⁷
- Tetrachloroethylene (D039): Exposure to tetrachloroethylene is associated with numerous harmful impacts, including: neurological effects (such as cognitive impairment), irritation of the respiratory tract, kidney dysfunction, and adverse impacts to the liver, the immune system, the hematologic system, and the reproductive system.⁴⁸

Preliminary findings from recent air monitoring in the Colfax area show: (1) dioxins/furans - chemical derivatives of perchlorates; (2) environmentally persistent free radicals; and (3) various metals, including aluminum, barium, cadmium, cobalt, chromium, iron, magnesium, manganese, nickel, vanadium, and zinc.⁴⁹

The United States Environmental Protection Agency (“EPA”) has recently emphasized the dangers associated with OB/OD, in particular:

Open burning and open detonation lack the controls needed for the efficient and complete combustion of wastes and the ability to control and measure the emission of combustion products. Waste explosives, when open burned or open detonated, have the potential to

⁴² ATSDR, Hexachlorobenzene – ToxFAQs at 1 (Sept. 2015), <https://www.atsdr.cdc.gov/toxfaqs/tfacts90.pdf>.

⁴³ *Id.*

⁴⁴ EPA, Hexachloroethane at 1-2 (Sept. 2016), <https://www.epa.gov/sites/default/files/2016-09/documents/hexachloroethane.pdf>; *see also* New Jersey Dep’t of Health and Senior Services, Hazardous Substance Fact Sheet: Hexachloroethane at 1-2 (July 2005), <https://nj.gov/health/eoh/rtkweb/documents/fs/0981.pdf>.

⁴⁵ ATSDR, Toxicological Profile for Nitrobenzene at 2-3 (Apr. 2022), <https://www.atsdr.cdc.gov/ToxProfiles/tp140.pdf>.

⁴⁶ *Id.* at 3.

⁴⁷ ATSDR, Public Health Statement: Pyridine at 2 (Sept. 1992), <https://www.atsdr.cdc.gov/ToxProfiles/tp52-c1-b.pdf>; *see also* New Jersey Dep’t of Health and Senior Services, Hazardous Substance Fact Sheet: Pyridine at 1-2 (Mar. 2002), <https://nj.gov/health/eoh/rtkweb/documents/fs/1624.pdf>.

⁴⁸ EPA, Tetrachloroethylene (Perchloroethylene) at 1-2 (Sept. 2016), <https://www.epa.gov/sites/default/files/2016-09/documents/tetrachloroethylene.pdf>.

⁴⁹ Jennifer Richmond-Bryant et al., Louisiana State University Superfund Research Program Data Collection from Colfax, LA at pdf p. 16-37 (Dec. 15, 2022), EDMS Doc. No. 13595948, <https://edms.deq.louisiana.gov/app/doc/view?doc=13595948>; Jennifer Richmond-Bryant et al., A community-integrated geographic information system study of air pollution exposure impacts in Colfax, LA at 728-746 (pdf p. 41-60), 27 Local Environment (2022), EDMS Doc. No. 13595948.

release to the environment heavy metals, perchlorate, particulate matter, per- and polyfluoroalkyl substances (PFAS), dioxins/furans, explosive compounds, and other toxic and hazardous contaminants. Contamination of air, soils, surface water, sediments, and groundwater has been caused by OB/OD through release and deposition of hazardous residuals, explosive kickout, and contaminants.⁵⁰

EPA also stated it has “documented contaminants that exceed action levels in environmental media at closed OB/OD units. These contaminants include explosives (RDX, HMX, perchlorate, TNT, DNT, nitroglycerine), heavy metals (aluminum, arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, phosphorus, selenium, silver, sodium, thallium, zinc), and other contaminants (arochlor, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, bis(2-ethylhexyl)phthalate, chrysene, dioxins/furans, DNB, dibromodioxane (EDB), endosulfan, ethylbenzene, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, nitrates, nitrobenzene, TNB, xylenes.).”⁵¹

C. Clean Harbors’ History of Noncompliance.

Clean Harbors has repeatedly violated the terms of its hazardous waste, air, and water permits, presenting serious risks to human health and the environment. According to EPA, Clean Harbors has been out of compliance with RCRA for all of the last twelve quarters and is considered a “significant noncomplier” in this category.⁵² The facility has also been out of compliance with the Clean Water Act for nine out of the last twelve quarters.⁵³ Further, Clean Harbors has been subject to at least ten informal enforcement actions and nine formal enforcement actions in the last five years.⁵⁴

In recent years, LDEQ has observed numerous violations at the facility related to Clean Harbors’ OB/OD operations and has issued numerous Compliance Orders and Notices of Potential Penalty to Clean Harbors for various infractions. For example:

- In October 2022, LDEQ issued a Notice of Potential Penalty related to the following violations that were noted during inspections in August 2021 and January 2022: (1) failure to remedy any deterioration or malfunction of equipment or structure immediately upon discovery (continued to conduct operations in the thermal treatment area without repairing the deteriorations that LDEQ had observed on numerous pads); and (2) failure to maintain the thermal treatment area to adequately prevent residue from contaminating the surrounding area (cracks/gaps in secondary containment wall were observed which

⁵⁰ EPA, Memorandum, Open Burning and Detonation (OB/OD) of Waste Explosives Under the Resource Conservation and Recovery Act (RCRA), at 5 (June 7, 2022), https://www.epa.gov/system/files/documents/2022-06/OBOD_Policy_Memo_signed_6.7.22_508.pdf (*hereinafter* “EPA Memo”) (attached as Exhibit 4).

⁵¹ EPA Memo at 5, n.15.

⁵² EPA, ECHO Detailed Facility Report, Clean Harbors Colfax (last visited Jan. 11, 2023), <https://echo.epa.gov/detailed-facility-report?fid=110000911210#pollutant>.

⁵³ *Id.*

⁵⁴ *Id.*

“could provide potential conduits for waste residues generated from treatment operations to contaminate soils”).⁵⁵

- In June 2020, an LDEQ inspection found several violations at the facility, including: (1) failure to remedy any deterioration or malfunction of equipment or structure immediately upon discovery (cracks/gaps observed in pads and wall at the thermal treatment area); (2) failure to maintain the thermal treatment area to adequately prevent residue from contaminating the surrounding area (ash was observed outside the thermal treatment area); (3) failure to repair any defects, deterioration, or malfunction of the thermal treatment area and associated structures before conducting additional treatment in those burn units; and (4) failure to provide required information regarding repairs at the thermal treatment area.⁵⁶
- In December 2019, LDEQ issued a Compliance Order after inspectors noted nine separate instances when the facility’s permitted burn time of five minutes was exceeded.⁵⁷ Clean Harbors also violated its permit by operating eighteen burn pans simultaneously when their permitted limit is ten.⁵⁸
- On September 10, 2019, LDEQ issued a Notice of Potential Penalty that lists 56 dates on which the inspector found that the burn times listed in the treatment logs exceeded the five-minute burn/detonation permit limit.⁵⁹ In numerous instances, the recorded burn time was ten times higher than the limit (*i.e.*, fifty minutes).⁶⁰
- On May 10, 2019, LDEQ issued a Notice of Potential Penalty that lists 174 dates on which the inspector found that the burn times listed in the treatment logs exceeded the five-minute burn/detonation permit limit.⁶¹ In some instances, the recorded burn time lasted as long as 120-180 minutes.⁶²
- In November 2018, the facility was issued a Compliance Order for several violations, including: (1) failure to remedy the deterioration or malfunction of equipment or

⁵⁵ LDEQ, Notice of Potential Penalty (Oct. 25, 2022), EDMS Doc. No. 13536130, <https://edms.deq.louisiana.gov/app/doc/view?doc=13536130>.

⁵⁶ LDEQ, Inspection Report at 5-6, 12-13 (pdf p. 7-8, 14-15) (June 30, 2020), EDMS Doc. No. 12413361, <https://edms.deq.louisiana.gov/app/doc/view?doc=12413361>.

⁵⁷ LDEQ, Consolidated Compliance Order & Notice of Potential Penalty, Enforcement Tracking No. MM-CN-19-01210, at 2-3 (pdf p. 4-5) (Dec. 27, 2019), EDMS Doc. No. 11995930, <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=11995930&ob=yes>.

⁵⁸ *Id.* at 3 (pdf p. 5).

⁵⁹ LDEQ, Notice of Potential Penalty, Enforcement Tracking No. AE-PP-19-00675, at 2-5 (Sept. 10, 2019), EDMS Doc. No. 11860579, <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=11860579&ob=yes>.

⁶⁰ *Id.*

⁶¹ LDEQ, Notice of Potential Penalty, Enforcement Tracking No. AE-PP-19-00156, at 3-10 (May 10, 2019), EDMS Doc. No. 11663855, <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=11663855&ob=yes>.

⁶² *Id.*

structures, as inspectors found cracks and gaps in the concrete and deterioration/damage to the treatment pads in the thermal treatment area; (2) failure to determine if a generated waste was a hazardous waste; and (3) storing solid waste on-site for more than one year without LDEQ's approval.⁶³

- In March 2018, Clean Harbors received another Compliance Order for releasing 450,000 to 475,000 gallons of untreated wastewater from the burn pad into the soil and nearby bodies of water.⁶⁴
- On April 11, 2018, LDEQ issued a Notice of Potential Penalty in which it outlined the following violations⁶⁵:
 - An inspection on October 3, 2017, found 151 instances where the burn times exceeded the five-minute burn/detonation permit limit.
 - An inspection on October 23, 2017, found 409 exceedances of the burn limit.
 - An inspection on November 13, 2017, found 46 exceedances of the burn limit.
 - An inspection on November 27, 2017, found 335 exceedances of the burn limit.
 - An inspection on December 11, 2017, found 135 exceedances of the burn limit.
 - An inspection on December 27, 2017, found 212 exceedances of the burn limit.
 - An inspection on January 22, 2018, found 237 exceedances of the burn limit.
- On July 18, 2017, LDEQ issued a Notice of Potential Penalty in which it outlined the following violations⁶⁶:
 - An inspection on February 9, 2017, found 31 instances where the burn times exceeded the five-minute burn limit.
 - An inspection on March 13 and 15, 2017, found 76 exceedances of the burn limit.
 - An inspection on March 20, 2017, found 5 exceedances of the burn limit.
 - An inspection on April 21, 2017, found 21 exceedances of the burn limit.
- In February 2017, LDEQ issued a Compliance Order for eight violations where the burn time exceeded the five-minute limit.⁶⁷

⁶³ LDEQ, Consolidated Compliance Order & Notice of Potential Penalty, Enforcement Tracking No. MM-CN-18-00649, at 2-4 (pdf p. 3-5) (Nov. 13, 2018), EDMS Doc. No. 11406742, <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=11406742&ob=yes>.

⁶⁴ LDEQ, Consolidated Compliance Order & Notice of Potential Penalty, Enforcement Tracking No. MM-CN-18-00108, at 2-4 (pdf p. 3-5) (Mar. 23, 2018), EDMS Doc. No. 11038175, <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=11038175&ob=yes>.

⁶⁵ LDEQ, Notice of Potential Penalty, Enforcement Tracking No. AE-PP-18-00143 (Apr. 11, 2018), EDMS Doc. No. 11060384, <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=11060384&ob=yes>.

⁶⁶ LDEQ, Notice of Potential Penalty, Enforcement Tracking No. AE-PP-17-00520 (July 18, 2017), EDMS Doc. No. 10714907, <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=10714907&ob=yes>.

⁶⁷ LDEQ, Consolidated Compliance Order & Notice of Potential Penalty, Enforcement Tracking No. AE-CN-17-00062, at 2-3 (pdf p. 4-5) (Feb. 7, 2017), EDMS Doc. No. 10492908, <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=10492908&ob=yes>.

- In October 2016, Clean Harbors was issued a Compliance Order covering a range of violations, including: (1) operating a surface impoundment area that received hazardous wastes from the thermal treatment area without a permit; (2) failure to provide records verifying that disposed ash originating from the thermal treatment area met applicable land disposal treatment standards; (3) failure to address deterioration of components of the thermal treatment area for over a year; (4) open burning of wastes that Clean Harbors was not permitted to burn (*e.g.*, 55-gallon plastic and metal drums, cardboard boxes, sweeper brushes, and empty munitions boxes); (5) failure to prevent “residue and debris generated during the thermal treatment process from contaminating the surrounding area and surface waters”; and (6) exceeding the five-minute burn duration limit, among many other violations.⁶⁸ The inspectors further noted that Clean Harbors had been discharging pollutants that they were not authorized to discharge, including antimony and copper, into the Retention Pond in violation of their LPDES Permit.⁶⁹

In March 2022, Clean Harbors entered into a settlement with DEQ in which the facility agreed to pay a penalty of \$605,000 related to violations from 2016 through 2019.⁷⁰

II. THE DRAFT PERMIT IS UNLAWFUL AND ARBITRARY

As described below, the draft permit does not comply with hazardous waste laws applicable to Clean Harbors’ OB/OD operations and proposed contained burn chamber system, and is arbitrary.

A. The Draft Permit Contravenes Requirements for Hazardous Waste OB/OD.

1. RCRA Law Governing Hazardous Waste OB/OD.

Resource Conservation and Recovery Act (“RCRA”) requirements expressly prohibit the open burning/open detonation of hazardous wastes, with just one, narrow exception applicable only to hazardous waste explosives for which there are no safe alternatives. Specifically, 40 CFR § 265.382 (Open burning; waste explosives) states:

Open burning of hazardous waste is *prohibited* except for the open burning and detonation of waste explosives. Waste explosives include waste which has the potential to detonate and bulk military propellants *which cannot safely be disposed of through other modes of treatment*... Owners or operators choosing to open burn or detonate waste explosives must do so in accordance with the following table *and in a manner that does not threaten human health or the environment*.

⁶⁸ LDEQ, Consolidated Compliance Order & Notice of Potential Penalty, Enforcement Tracking No. MM-CN-16-01015, at 5-12 (pdf p. 7-14) (Oct. 27, 2016), EDMS Doc. No. 10386166, <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=10386166&ob=yes>.

⁶⁹ *Id.*

⁷⁰ LDEQ, Settlement, SA-MM-20-0082 (Mar. 8, 2022), https://www.deq.louisiana.gov/assets/docs/General/Settlement_Agreements/2021/CleanHarbors0082_Final.pdf [archived at <https://perma.cc/YEW8-L4KW>].

Pounds of waste explosives or propellants	Minimum distance from open burning or detonation to the property of others
0 to 100	204 meters (670 feet)
101 to 1,000	380 meters (1,250 feet)
1,001 to 10,000	530 meters (1,730 feet)
10,001 to 30,000	690 meters (2,260 feet)

(Emphasis added). Louisiana has incorporated this provision into the state hazardous waste program at LAC 33:V.4533 and cannot permit any OB/OD practices that are broader or less stringent. 42 U.S.C. §§ 6926(b), 6929.

The longstanding OB/OD prohibition and narrow exception are unambiguous in providing that OB/OD of hazardous wastes is only permissible in limited circumstances where there are no other modes of treatment to safely dispose of hazardous waste explosives. 40 C.F.R. § 265.382. In promulgating this law more than forty years ago, EPA recognized that the “potential human health hazards associated with the practice [of open burning of hazardous wastes] dictate that open burning be ended now.”⁷¹ The agency specifically exempted waste explosives only because it believed that open burning and open detonation were, at that time, “currently the only alternatives for disposal of most munitions.” *Id.* Thus, EPA allowed the “open burning and open detonation of waste explosives during the interim status period, provided that it is conducted at minimum distances from the property of others.” *Id.* (as codified in 40 C.F.R. § 265.382).

EPA recently reaffirmed that “open burning of hazardous waste, including open detonation, is currently prohibited under RCRA, except for the open burning and detonation of waste explosives, as defined in 40 CFR 265.382, which cannot safely be disposed of through other modes of treatment.”⁷² EPA’s memorandum confirms that facilities requesting permits for OB/OD “must demonstrate that their waste explosives ‘cannot safely be disposed of through other modes of treatment’ to qualify for the exception and use OB/OD.”⁷³ To make such a showing, facilities “must successfully demonstrate, through an evaluation of alternative technologies, that there are no other technologies that can safely treat each waste stream.”⁷⁴ This evaluation is to consider “the findings in the 2019 EPA and NASEM published reports which identify safe available alternative technologies for most, if not all waste streams that are currently being open burned.”⁷⁵ EPA’s memorandum is clear that agencies, including LDEQ, “must not permit OB/OD units that do not meet [these] existing requirements” of the federal hazardous waste program.⁷⁶

⁷¹ EPA, Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, 45 Fed. Reg. 33,154, 33,217/2 (May 19, 1980).

⁷² EPA Memo at 7.

⁷³ *Id.* (emphasis in original).

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.* at 1 (emphasis in original).

All RCRA permits must include terms and conditions necessary to ensure protection of human health and the environment. 42 U.S.C. § 6925(c)(3). Each RCRA permit must also include permit conditions necessary to “achieve compliance with the Act and regulations, including each of the applicable requirements specified in [40 C.F.R.] parts 264 and 266 through 268.” 40 C.F.R. § 270.32(a). RCRA further requires all permitting authorities to “consider improvements in the state of control and measurement technology” in reviewing an application for a permit renewal. 42 U.S.C. § 6925(c)(3). RCRA Subpart X permits, in particular, “are to contain such terms and provisions necessary to protect human health and the environment, including, but not limited to, as appropriate, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit.” 40 C.F.R. § 264.601. This includes provisions that ensure “[p]revention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents” to the groundwater or subsurface environment, wetlands, soil surface, and air. *Id.* § 264.601(a)–(c).

2. Alternatives to OB/OD.

Today, alternatives to OB/OD have been identified for “most, if not all waste streams that are currently being open burned[.]”⁷⁷ In 2019, the National Academies of Sciences, Engineering, and Medicine (NASEM) published a report analyzing a wide range of technology alternatives to OB/OD. Among other things, the NASEM concluded that “with few exceptions, it is technically possible to apply existing alternative technologies to demilitarize the majority of [munitions hazardous wastes] in the stockpile inventory.”⁷⁸ Indeed, there “are no significant technical, safety, or regulatory barriers to the full-scale deployment of alternative technologies for the demilitarization of the vast majority of the conventional waste munitions, bulk energetics, and associated wastes.”⁷⁹ The NASEM found that all of the alternative technologies described in the report would have “lower emissions and less of an environmental and public health impact, would be monitorable, and would likely be more acceptable to the public.”⁸⁰

EPA also published an Alternatives Report in 2019 similarly establishing that technology for treating and disposing of munitions hazardous wastes has evolved in the forty years since EPA promulgated the OB/OD exception, and there are now numerous safe alternatives to OB/OD.⁸¹ According to EPA, “a range of alternative treatment technologies that have demonstrated a capability to satisfy safety mandates are now available. These technologies are contained or closed and (typically) employ pollution controls to treat the byproducts before release.”⁸² As EPA explained, these alternatives “can be, and have been used successfully, in place of”

⁷⁷ EPA Memo at 7 (citing 2019 EPA and NASEM reports).

⁷⁸ NASEM, *Alternatives for the Demilitarization of Conventional Munitions* at 80 (2019), <https://doi.org/10.17226/25140> (hereinafter “NASEM Report”) (attached as Exhibit 5).

⁷⁹ *Id.* at 4.

⁸⁰ *Id.*

⁸¹ EPA, EPA 530-R-19-007, *Alternative Treatment Technologies to Open Burning and Open Detonation of Energetic Hazardous Wastes* (Dec. 2019), https://www.epa.gov/sites/production/files/201912/documents/final_obod_alttechreport_for_publication_dec2019_508_v2.pdf (attached as Exhibit 6).

⁸² *Id.* at 6.

OB/OD.⁸³ As EPA recently explained, “[u]se of safe alternative technologies in general represents a greater level of control and more complete treatment, and therefore better protection of human health and the environment—capturing and controlling emissions and releases to the environment is more protective compared to treatment open to the environment.”⁸⁴

3. The draft permit provisions allowing OB/OD are unlawful and arbitrary and capricious.

- a. LDEQ cannot allow continued OB/OD until the contained burn chamber system is operational or for another two years.

The draft permit unlawfully and arbitrarily allows Clean Harbors to continue OB/OD of significant amounts of hazardous wastes—substantially more than the current permit allows—for up to another two years after permit issuance. In particular, section V.B of the draft permit includes provisions permitting OB/OD of the hazardous wastes listed in Table 6, including highly toxic pollutants discussed above, “until commencement of operations of the [Contained Burn Chamber System] or within two years from issuance date of this permit, whichever is first.”⁸⁵ Table 6 and related provisions authorize Clean Harbors to open burn up to “561,700 pounds per year (net explosive weight) or 410 pounds per hour of hazardous waste per an eight-hour day” during this time.⁸⁶

These provisions do not comply with RCRA and corresponding state law. As discussed above, OB/OD is allowed only in limited circumstances where, through detailed analysis, a facility establishes there are no alternatives. The 2019 EPA and NASEM reports make clear that alternative technologies are available for “most, if not all” of the hazardous wastes currently open burned. Far from establishing there are no alternatives for the hazardous wastes it accepts for OB/OD, Clean Harbors itself has identified an alternative (the contained burn chamber system) for “up to 90% of [its] incoming waste.”⁸⁷ Because there is indisputably an alternative mode of treatment for the vast majority of Clean Harbors’ hazardous wastes, any continued OB/OD of those wastes is strictly prohibited under 40 C.F.R. § 265.382. There is no exception allowing Clean Harbors to continue OB/OD of these hazardous wastes any longer, simply because the alternative is not yet operational at Clean Harbors Colfax. The law plainly requires consideration of all alternative technologies, including those at other sites and not yet in operation. It is both unlawful and illogical to only consider alternatives that currently exist at Clean Harbors Colfax. It would also incentivize facilities to delay or avoid implementing safe alternatives altogether, denying affected communities the protections guaranteed by RCRA. Thus, continued OB/OD defies the text and purpose of the OB/OD law, and fails to ensure protection of human health and the environment. 42 U.S.C. § 6925(c)(3); *see also* 42 U.S.C. §§

⁸³ *Id.* at 12.

⁸⁴ EPA Memo at 6.

⁸⁵ Draft Permit at V.B.2.e.

⁸⁶ Draft Permit at V.B.6.a.; Table 6.

⁸⁷ Clean Harbors Colfax, LLC, Additional Revisions to Responses to NOD #1 at 12 (pdf p. 15) (Apr. 2022), EDMS Doc. No. 13216557, <https://edms.deq.louisiana.gov/app/doc/view?doc=13216557>.

6926(b), 6929 (states may not permit hazardous waste practices that are less stringent or broader than the narrow terms of 40 C.F.R. § 265.382).⁸⁸

Moreover, Clean Harbors and LDEQ have not shown that there are no alternative means for safely managing those hazardous wastes for another two years or until Clean Harbors begins operation of its proposed CBCS. Such a showing is essential to limiting continued OB/OD to only those circumstances where necessary as intended by 40 C.F.R. § 265.382 and RCRA's broad mandate to protect human health and the environment. For example, the permitting documents are void of any evaluation of whether the hazardous wastes Clean Harbors accepts from other facilities for OB/OD can be stored at those facilities or sent to other sites for management in a manner that does not involve OB/OD and pose the serious kinds of risks to human health and the environment that Clean Harbors' OB/OD poses.⁸⁹ As EPA has instructed, hazardous waste OB/OD operations should be reduced by storing wastes or sending them to other sites with alternative technologies when it is safe to do so.⁹⁰ Given that Clean Harbors receives its hazardous wastes from other sites across the country, there can be no doubt that the hazardous wastes can be stored at or transported to different, safer locations. In reviewing the permit application, LDEQ may not consider Clean Harbors' interests in continuing its OB/OD operations as a reason for disregarding safe alternatives to OB/OD for managing hazardous waste. LDEQ's mandate is to protect human health and the environment and comply with the narrow terms of the law.

Even if Clean Harbors and LDEQ could show that OB/OD is necessary for the next two years (they cannot), there is similarly no basis for allowing Clean Harbors to accept 25% more hazardous wastes for OB/OD than it is currently permitted for, over the next two years.⁹¹ This runs counter to the purpose of the narrow exception in 40 C.F.R. § 265.382, and EPA's specific direction to, in cases where OB has been shown to be necessary due to a lack of any alternatives, "reduce wastes being open burned/open detonated" and "[r]educ[e] the permitted amount/volume of waste that can be treated in the OB/OD unit until the alternative technology is in operation."⁹² It also increases the risks to communities in clear contravention of RCRA's core requirement to protect human health and the environment. For all these reasons, these draft permit provisions allowing OB/OD to continue violate RCRA and are arbitrary and capricious.

⁸⁸ EPA has long recognized the dangers associated with OB/OD and made clear that it carved out a narrow exception to the prohibition of the practice only because of the lack of alternatives at the time. Technology has developed, however, and safe alternatives are now available. As discussed above, Clean Harbors' OB/OD operations involve extremely dangerous chemicals and pose serious threats to communities and the environment. These dangers are evidenced by Clean Harbors' extensive history of noncompliance with its OB/OD permit and other environmental laws.

⁸⁹ As discussed below, Clean Harbors cannot rely on its 2017 alternatives report, which is outdated and inconsistent with current findings concerning OB/OD and alternative technologies.

⁹⁰ EPA Memo at 11.

⁹¹ Clean Harbors is currently permitted to open burn 480,000 pounds per year NEW (net explosive weight). Clean Harbors Colfax, Final Hazardous Waste Operating Renewal Permit at pdf p. 30-31 (Sept. 2007), EDMS Doc. No. 5902583, <https://edms.deq.louisiana.gov/app/doc/view?doc=5902583>. The draft permit would allow the facility to increase this amount by approximately 25% for the next two years to 561,700 pounds per year NEW. Draft Permit at V.B.6.a.

⁹² EPA Memo at 10-11.

- b. LDEQ cannot allow OB/OD to continue beyond two years or after the CBCS is operational.

The draft permit also unlawfully and arbitrarily allows Clean Harbors to continue OB/OD of certain hazardous wastes for the full term of the permit, even after the proposed contained burn chamber system is operational.

- i. *The permit terms allowing OB/OD of “Manufacturer’s Waste (65% Propellant) for cylinders” are unlawful and arbitrary.*

Draft permit section V.B.8.b. provides that “[c]ommencing two years from the issuance date of this permit or upon commencement of operations of the CBCS, whichever is first” Clean Harbors may OB/OD up to 4,000 pounds per year (net explosive waste) of hazardous wastes described generally as “Manufacturer’s Waste (65% Propellant) for cylinders.”⁹³ This provision is inconsistent with RCRA and without basis.

As discussed above, RCRA requires facilities to demonstrate, through an evaluation of alternative technologies, that their hazardous waste explosives “cannot safely be disposed of through other modes of treatment” in order to qualify for the OB/OD exception. 40 C.F.R. § 265.382. “Specifically, for a particular waste to be permitted for OB/OD, the facility must successfully demonstrate, through accurate waste characterization and an evaluation of alternative technologies, that the waste has the potential to detonate and that there are no other technologies that can safely treat that waste stream.”⁹⁴ There has been no such demonstration for the wastes described in the draft permit as “Manufacturer’s Waste (65% Propellant) for cylinders.”

Instead, Clean Harbors presents only bald, conclusory assertions that the hazardous wastes cylinders “have NO other viable management method in North America within the [Clean Harbors] network or any other cylinder management entity at this time.”⁹⁵ Clean Harbors notes that it unsuccessfully attempted using “incineration and hydrolysis” for these hazardous wastes.⁹⁶ However, it provides no evidence or documentation concerning these attempts. Nor does Clean Harbors show that it has considered any alternative technologies besides incineration and hydrolysis, including those detailed in the 2019 EPA and NASEM reports. Clean Harbors also provides no evidence to show that it considered any other alternative beyond what is currently used “within the CHES network or any other cylinder management entity at this time.”⁹⁷ Clean Harbors is obligated under 40 C.F.R. § 265.382 to evaluate *all* possible alternatives in justifying the need for OB/OD, not just those currently in use and within a limited network.

Clean Harbors’ 2017 alternatives report, which has been resubmitted with its revised permit renewal application, does not support continued OB/OD of the cylinders or any other hazardous

⁹³ Draft Permit at V.B.8.b.; Table 7.

⁹⁴ EPA Memo at 7-8.

⁹⁵ Clean Harbors Colfax, LLC, Response to Request for Additional Information at 1 (pdf p. 2) (June 2, 2022), EDMS Doc. No. 13316502, <https://edms.deq.louisiana.gov/app/doc/view?doc=13316502>.

⁹⁶ *Id.*

⁹⁷ *Id.*

wastes.⁹⁸ The report was completed before, and thus does not consider, the 2019 EPA and NASEM reports, or EPA's Memorandum. The report also includes numerous claims dismissing alternatives that are contrary to EPA and NASEM findings, irrelevant, and based on outdated information. For example, the report is premised on the idea that "[m]any of the technologies reviewed in this and previous assessments are still in early development or have been used on a very narrow range of energetics and were not deemed mature or robust enough for a commercial operation."⁹⁹ This is directly refuted by the NASEM and EPA.¹⁰⁰

Regardless, the six-year-old report is outdated, and alternatives must be reassessed in order to determine if Clean Harbors is eligible for an OB/OD permit pursuant to RCRA. As EPA has explained, "[b]ecause new technologies routinely become available, a facility must periodically reevaluate, e.g., at permit issuance and renewal" whether there are alternatives for each waste stream.¹⁰¹ Reevaluation "is required even if the facility has previously made this evaluation...[t]his is particularly true given the findings of in the 2019 EPA and NASEM published reports which identify safe available alternative technologies for most, if not all, waste streams that are currently being open burned..."¹⁰² As such, Clean Harbors' claims concerning the lack of alternatives are unsupported and fall far short of RCRA's requirement to demonstrate that the hazardous wastes cylinders "cannot safely be disposed of through other modes of treatment." 40 C.F.R. § 265.382.

Moreover, the draft permit provisions allowing Clean Harbors to accept, store, treat, or dispose of "cylinder" hazardous wastes are inconsistent with 40.C.F.R. § 265.382, which plainly aims to limit OB/OD to only those limited circumstances where the practice is necessary, and the core requirement to ensure protection of human health and the environment. 42 U.S.C. § 6925(c)(3). While Clean Harbors admits that these cylinders are dangerous, there is no showing that its OB/OD of these hazardous wastes will be protective of human health and the environment.¹⁰³ OB/OD is itself an extremely dangerous practice,¹⁰⁴ and as EPA has instructed, it should be reduced by storing wastes when it is safe to do so.¹⁰⁵ Clean Harbors itself states that the hazardous waste cylinders can be safely stored: "It's important to note that the cylinders are stable in normal storage conditions and don't have the potential to denotate unless involved in an

⁹⁸ Southwest Research Institute, *Alternatives for the Disposal of Energetic Waste at the Clean Harbors Colfax LLC Open Burn Open Detonation Facility, Colfax, Louisiana, Final Review Report* (June 6, 2017) (resubmitted Sept. 12, 2022), EDMS Doc. No. 13483745, <https://edms.deq.louisiana.gov/app/doc/view?doc=13483745> (*hereinafter* "Clean Harbors Alternatives Report").

⁹⁹ Clean Harbors Alternatives Report at 54 (pdf p. 61).

¹⁰⁰ NASEM Report at 90 (explaining that that "[m]ost of the alternative technologies that could replace OB and OD are mature and many have already been permitted," including those mentioned in Clean Harbors' report); EPA Memo at 7 (explaining that the EPA and NASEM reports "identify safe available alternatives for most, if not all waste streams that are currently being open burned...").

¹⁰¹ EPA Memo at 7.

¹⁰² *Id.*

¹⁰³ Clean Harbors Colfax, LLC, Response to Request for Additional Information at 1-3 (pdf p. 2-4) (June 2, 2022), EDMS Doc. No. 13316502, <https://edms.deq.louisiana.gov/app/doc/view?doc=13316502>.

¹⁰⁴ EPA Memo at 5.

¹⁰⁵ *Id.* at 10-11.

upset condition.”¹⁰⁶ Yet Clean Harbors and LDEQ have not assessed, as they must, the possibility that the canisters could be safely stored or managed elsewhere, rather than brought to Clean Harbors Colfax for OB/OD.

- ii. *The permit term allowing “case-by-case” OB/OD is unlawful and arbitrary.*

Draft permit section V.B.8.c. is also unlawful and arbitrary. It allows for OB/OD upon a “case-by-case basis” determination that hazardous waste is “not suitable for treatment in the CBCS and not amenable to pretreatment (i.e., there is no alternative technology available), or if testing by OB/OD is required to ensure safety of the material prior to treatment in the CBCS.”¹⁰⁷ Under this permit term, Clean Harbors is to submit to LDEQ a request for review and consideration for OB/OD.¹⁰⁸ “If the waste is determined suitable for alternative treatment methods, then the waste shall not be treated by OB/OD at the facility. If a waste is not approved for treatment by OB/OD, the Permittee may elect to return the waste to the generator or transfer for treatment to another treatment facility.”¹⁰⁹

This allowance for “case-by-case” OB/OD determinations defies RCRA and reason by allowing Clean Harbors to accept hazardous wastes without first ensuring they can be lawfully treated at this facility.¹¹⁰ Allowing Clean Harbors to accept hazardous wastes before it knows those wastes can be treated in the contained burn chamber or that there are no other alternatives to open burning them is inconsistent with requirements concerning waste analysis, which require facilities to have detailed information about the wastes they are receiving before they manage them, including, at a minimum information needed to show that those hazardous wastes can be treated, stored, or disposed of lawfully on-site. *See* 40 C.F.R. § 264.13(a)(1). *See also* LAC 33:V.1519.A. This is, of course, crucial to ensuring that hazardous wastes are managed safely from “cradle to grave.” Under these requirements, there can be no justification for case-by-case OB/OD determinations because Clean Harbors should already have the information necessary to know whether it can treat the hazardous wastes in the contained burn chamber system or if there are other alternatives to OB/OD before accepting the wastes in the first place. To permit those analyses to occur after the wastes have been accepted by Clean Harbors, defies these requirements and the very purpose of a waste analysis plan.

This permit allowance also amounts to an end-run around the OB/OD exclusion, which facilities are only eligible to claim if they first demonstrate, through a detailed evaluation, that there are no alternatives for each one of the waste streams it may open burn/open detonate, *before* it obtains a permit to do so. 40 C.F.R. § 265.382. Permitting Clean Harbors to accept hazardous wastes and evaluate alternatives later defies the very purpose of EPA’s general prohibition and narrow exception for OB/OD. To be clear, EPA has instructed permitting authorities to “[p]rohibit

¹⁰⁶ Clean Harbors Colfax, LLC, Response to Request for Additional Information at 1 (pdf p. 2) (June 2, 2022), EDMS Doc. No. 13316502, <https://edms.deq.louisiana.gov/app/doc/view?doc=13316502>.

¹⁰⁷ Draft Permit at V.B.8.c.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ Draft permit at V.B.8.c.

acceptance of wastes which are not permitted to be treated or which do not have a proper hazardous waste characterization.”¹¹¹

Logically, the provision cannot possibly ensure protection of human health and the environment. Once Clean Harbors accepts, and receives payment for, hazardous wastes, it has an undeniable incentive to treat the hazardous wastes via OB/OD if it cannot burn them in the CBCS, rather than pay to send them back to the generator or to find another treatment facility, as the draft permit contemplates. That the draft permit requires Clean Harbors to ask LDEQ whether alternative treatments are available prior to open burning wastes under this provision does not cure the problem as there is no basis for allowing Clean Harbors to accept those hazardous wastes in the first instance, regardless of whether LDEQ is later engaged. When Clean Harbors does inevitably conjure up excuses to open burn/open detonate hazardous wastes under this provision, LDEQ will be hard-pressed to refute them on a case-by-case basis, especially without public engagement. And given Clean Harbors’ long history of noncompliance, LDEQ cannot assume Clean Harbors will voluntarily consult the regulators, instead of abusing the provision to conduct additional, unpermitted OB/OD.¹¹² In effect, this provision creates a loophole for even more OB/OD at Clean Harbors without the requisite oversight. Instead of allowing these determinations to be made later, outside of this permitting process, LDEQ must strike this provision, and prohibit accepting hazardous wastes that cannot be treated in the proposed contained burn chamber system.

This permit term also contravenes RCRA’s public participation requirements. RCRA requires that public participation in permitting must be “provided for, encouraged, and assisted by” LDEQ. 42 U.S.C. § 6974(b)(1). *See also* 40 C.F.R. § 25.3, 4. Far from meeting that mandate, the draft provision deprives communities of important information about Clean Harbors’ OB/OD activities and the opportunity to comment on them. Indeed, as drafted, communities will not even be notified when Clean Harbors open burns/ or open detonates additional hazardous wastes under this provision or what analysis, if any, was done to assess alternatives, much less whether the activities comply with the law or present additional human health and environmental dangers. As discussed, this information and opportunity is to be provided during the public comment period on the permit, before the permit is issued. EPA has specifically emphasized the importance of public participation in OB/OD decisionmaking, explaining the need “to engage with communities on a site-specific basis on permitting activities for [OB/OD] facilities, to learn about citizens’ concerns and share information so that they can effectively participate in the permitting process, and so that permitting actions can fully consider and address issues that impact community health.”¹¹³ This can hardly be achieved if the permit allows for key discussions and decisions regarding OB/OD to happen behind closed doors, with no public input or oversight whatsoever. At a bare minimum, the public must be notified and have an

¹¹¹ EPA Memo at 11.

¹¹² The confusing language in Section V.B.8.c further threatens, and fails to ensure protection of, human health and the environment. As drafted, it is unclear whether and when Clean Harbors must seek review and approval from LDEQ and EPA before open burning or open detonating hazardous wastes, how that determination will be made, and what Clean Harbors must do if OB/OD is deemed inappropriate (the draft states it “may” elect to return the waste to the generator or transfer it elsewhere).

¹¹³ EPA Memo at 2.

opportunity to comment each time Clean Harbors seeks review and/or approval to open burn/open detonate from LDEQ and/or EPA.

- c. The draft permit terms allowing continued OB/OD do not satisfy Subpart X and ensure protection of human health and the environment.

Even if OB/OD were permissible here (it is not), the draft permit provisions for OB/OD are unlawful because they fail to comply with the requirements of 40 C.F.R. 264 Subpart X for “miscellaneous units.” In particular, the draft permit does not “contain such terms and provisions as necessary to protect human health and the environment, including, but not limited to, as appropriate, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit.” 40 C.F.R. § 264.601. This includes provisions that ensure “[p]revention of any releases that may have adverse effects on human health or the environment” due to migration of waste constituents” to the groundwater or subsurface environment, wetlands, soil surface, and air. *Id.* § 264.601(a)-(c); *see also* LAC 33:V.3203.

It has not been established that the permit provisions will prevent any potentially harmful pollution releases from Clean Harbors’ OB/OD operations. By definition, OB/OD releases hazardous pollutants directly into the air with no controls. It is unequivocally a dangerous practice “that may have adverse effects on human health and the environment.”¹¹⁴ As EPA has explained, “[w]aste explosives, when open burned or open detonated, have the potential to release to the environment heavy metals, perchlorate, particulate matter, per- and polyfluoroalkyl substances (PFAS), dioxins/furans, explosive compounds, and other toxic and hazardous contaminants.”¹¹⁵ Clean Harbors’ own extensive record of harmful pollution releases and recent findings concerning OB/OD make clear that the risks associated with its OB/OD operations are very real. Neither LDEQ nor Clean Harbors have shown—or can show—that permit terms allowing continued OB/OD at Clean Harbors can ensure “[p]revention of any releases that may have adverse effects on human health or the environment.” 40 C.F.R. § 264.601(a)-(c); *see also* LAC 33:V.3203.

Clean Harbors’ feeble attempt to satisfy Subpart X requirements hinges on outdated studies and unsupported claims and does not justify continuation of OB/OD. In particular, Clean Harbors relies on a “Technical Support Document” and “Health Risk Assessment” completed more than thirty years ago. Clean Harbors offers no evidence—just baseless assertions—that these documents are relevant and representative of current operations and releases and are otherwise sufficient to allow continued OB/OD. It is clear from the face of these documents that they are severely deficient. For example, the risk assessment considers only decades-old, limited air modeling from before Clean Harbors even began its OB/OD operations. It does not assess actual emissions and pollution releases from its years of OB/OD, the risks from “ingestion of soil, vegetation and fish which have been contaminated through plume deposition, and chemical

¹¹⁴ EPA Memo at 5. *See also* NASEM Report at 4 (finding that all alternatives “would have lower emissions and less of an environmental impact and public health impact”); *id.* at 86, Table 8.2 footnote c (“All alternative technologies are enclosed and have lower emissions than OB, so perform better in terms of environmental and public health impacts.”).

¹¹⁵ EPA Memo at 5.

transport and uptake,”¹¹⁶ “the potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.”¹¹⁷ or developments in risk assessment approaches.

Although Clean Harbors has been conducting OB/OD for decades, Clean Harbors presents no up-to-date assessment of the full extent of its uncontrolled air emissions, and the associated risks and impacts on human health and the environment, including potential cumulative impacts.¹¹⁸ Its more recent limited monitoring is not representative of emissions where people live and communities miles beyond the site where emissions have been detected. Clean Harbors also fails to address conclusions from EPA and NASEM or its own past pollution releases showing the dangers inherent in OB/OD. Nor does it present any updated analysis concerning expected emissions from substantially increasing its OB/OD operations for up to two more years, or from the OB/OD of new hazardous wastes included in the draft permit.

In its outdated Alternatives Report, Clean Harbors cites only limited sampling conducted over a single brief period many years ago,¹¹⁹ a study of OB/OD in Europe that appears to compare estimated emissions from some sort of OB/OD of just one waste (M-9) against estimated emissions from some sort of incineration, and emissions information from other OB/OD sites.¹²⁰ Clean Harbors presents no evidence that this information is representative of its current actual emissions or of the emissions associated with the terms of the new draft permit, or even relevant given the wide range of hazardous wastes it open burns. Given these significant deficiencies and the lack of a comprehensive analysis of pollution releases, LDEQ cannot ensure that the terms of the draft permit are sufficiently protective under Subpart X.

In addition, the draft permit unlawfully and arbitrarily fails to include all requirements set forth in 40 C.F.R. 264 subparts A through E, G and H, which are applicable to “miscellaneous units” and generally necessary to protect human health and the environment.¹²¹ LDEQ must ensure that the permit includes all these requirements or demonstrate that they are not applicable and necessary to protect human health and the environment here. This includes, for example, omitted

¹¹⁶ R&D Manufacturing Inc., Final Health Risk Assessment Protocol for the R&D Thermal Treatment System at 3-4 (pdf p. 500) (Sept. 1990), EDMS Doc. No. 12346319, <https://edms.deq.louisiana.gov/app/doc/view?doc=12346319>.

¹¹⁷ See 40 C.F.R. § 264.601(c)(7); LAC 33:V.3203.C.7.

¹¹⁸ See, e.g., EPA, *Cumulative Impacts Research, Recommendations for EPA’s Office of Research and Development* (Sept. 2022), https://www.epa.gov/system/files/documents/2022-09/Cumulative%20Impacts%20Research%20Final%20Report_FINAL-EPA%20600-R-22-014a.pdf [archived at <https://perma.cc/ZQ6G-BZHG>].

¹¹⁹ Clean Harbors Alternatives Report at 8 (pdf p. 15). Even this limited sampling detected pollutants, including toxic metals and dioxins/furans. *Id.* at 8 (pdf p. 15). Clean Harbors asserts that these toxics were in the background and community at levels higher than at the fenceline because of “low levels and the normal activities of living in the residential areas,” but presents no supporting data or information about what types of activities in Colfax could be producing the toxics associated with Clean Harbors’ OB/OD activities.

¹²⁰ Clean Harbors Alternatives Report at 7, 29 (pdf p. 14, 36).

¹²¹ EPA, Hazardous Waste Miscellaneous Units; Standard; Applicable to Owners and Operators, 52 Fed. Reg. 46,946, 46,955/1 (Dec. 10, 1987) (“The Agency intends the general facility requirements of Part 264, Subparts A through E, G, and H, to apply to miscellaneous units.”).

requirements for post-closure (40 C.F.R. 264 subpart G); manifest system, recordkeeping, and reporting (40 C.F.R. 264 subpart E)¹²²; and financial requirements for post-closure care (40 C.F.R. 264 subpart H). The need to require post-closure planning and compliance in this permit process is particularly important given EPA's findings that "clean closure of OB/OD units, including the removal of hazardous waste residuals and explosive kickout, is generally difficult and costly to achieve" and that high levels of contaminants have been detected at closed OB/OD sites.¹²³ LDEQ cannot simply accept Clean Harbors' generic claims that it will achieve clean closure, and must ensure post-closure care now. Likewise, and at a minimum, full compliance with the Subpart E requirements is essential to ensure that Clean Harbors obtains and maintains important information concerning its operations.

B. The Draft Permit Provisions for the Proposed "Contained Burn Chamber System" Fail to Comply with RCRA.

1. The Proposed "Contained Burn Chamber System" is a Hazardous Waste Incinerator and Must Meet All Standards for Hazardous Waste Incinerators.

In addition to OB/OD, the draft permit allows the construction and use of a proposed "contained burn chamber system" that Clean Harbors says will displace some portion of hazardous wastes that are currently open burned. This "system," as described by Clean Harbors itself and evidenced by its functionality, is a hazardous waste incinerator that must meet the complete set of prescriptive and protective hazardous waste incinerator standards set forth at 40 C.F.R. Part 63, Subpart EEE, and 40 C.F.R. Part 264, Subpart O. However, the draft permit unlawfully and arbitrarily fails to include all these applicable requirements that are necessary to safeguard against the toxic emissions that will be released from Clean Harbors' system.

a. The proposed system meets the definition of hazardous waste incinerator.

RCRA and Clean Air Act 40 C.F.R. Part 63, Subpart EEE establish standards and requirements for hazardous waste incinerators, which are devices defined as "an incinerator in [40 C.F.R.] § 260.10...and that burns hazardous waste at any time." 40 C.F.R. § 63.1201. In turn, 40 C.F.R. § 260.10 states that an "[I]ncinerator means any enclosed device that...[u]ses controlled flame combustion and neither meets the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace." Controlled flame combustion refers to "a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled."¹²⁴ An engineered burner is not needed for controlled flame combustion.¹²⁵ As defined, "the hazardous waste incinerator includes all associated firing systems and air pollution control devices, as well as the combustion chamber equipment." 40 C.F.R. § 63.1201. In other

¹²² It is not sufficient for the permit to state the "permittee shall comply with manifest requirements as applicable." Draft permit at II.C.19. The permit must specify the applicable requirements.

¹²³ EPA Memo at 5.

¹²⁴ EPA, RO 14238, Memorandum, Response to Questions from California Department of Toxic Substances Control Regarding Various Issues on the Combustion of Hazardous Waste, <https://rcrapublic.epa.gov/files/14238.pdf> (attached as Exhibit 7).

¹²⁵ *Id.*

words, a hazardous waste incinerator is a system including devices affecting air pollution, not just the chamber itself.

The proposed “contained burn chamber system” is, by definition, a hazardous waste incinerator. Specifically, the system is: (1) an enclosed device, (2) that “burns hazardous waste at any time,” (3) uses controlled flame combustion; and (4) is not a boiler, sludge dryer, carbon regeneration unit, or industrial furnace. 40 C.F.R. § 63.1201; 40 C.F.R. § 260.10. In asserting that the hazardous waste incinerator requirements do not apply, Clean Harbors does not—and cannot—dispute that its system is an enclosed device that burns hazardous waste at any time, and is not a boiler, sludge, dryer, carbon regeneration unit, or industrial furnace. Instead, it claims that the proposed contained burn chamber itself, considered on its own, does not use controlled flame combustion, and cites other factors that are not relevant to the definition of hazardous waste incinerators. Clean Harbors’ efforts to evade the applicable hazardous waste incinerator requirements and standards contravene RCRA and the Clean Air Act and do not justify the defects in the draft permit.

In determining whether the hazardous waste incinerator requirements apply, LDEQ must consider “all associated firing systems and air pollution control devices, as well as the combustion chamber equipment.” 40 C.F.R. § 63.1201. Following this instruction and looking at the entire proposed “contained burn chamber system,” “controlled flame combustion” is not only present but is essential to Clean Harbors’ proposed process. First, contrary to Clean Harbors’ characterizations, controlled flame combustion does occur in the contained burn chamber unit itself where hazardous wastes are burned in a controlled manner via fuel inputs and/or waste feed compositions and rates. Once the hazardous waste burning is initiated, the process allows for the presence of flames (due to the presence of ample oxygen) depending on the nature of wastes and the fuel used (*e.g.*, diesel), as well as the waste feed rates.¹²⁶ Further, gases from the contained burn chamber are routed into a high-temperature thermal oxidizer (also referred to as an “afterburner”), which serves as an air pollution control device, wherein fuel and oxygen rates are controlled to maintain a specific temperature for flame combustion of toxic pollutants.¹²⁷ The system also includes a deactivation furnace, which as described by Clean Harbors, uses “fuel-fired burners” and “controlled flame combustion.”¹²⁸ Each of these units, and the system as a whole, meet the definition of hazardous waste incinerators, therefore requiring compliance with all hazardous waste incinerator requirements set forth in 40 CFR 63 Subpart EEE and RCRA.¹²⁹

Clean Harbors says the contained burn chamber unit itself is not a “combustion chamber” and “does not include burners and does not use controlled flame combustion for the treatment of the

¹²⁶ Clean Harbors Colfax, LLC, Subpart X Applicability to the Proposed Contained Burn Chamber at pdf p. 5-6 (June 15, 2021), EDMS Doc. No. 12759081, <https://edms.deq.louisiana.gov/app/doc/view?doc=12759081> (*hereinafter* “Subpart X Applicability Letter”).

¹²⁷ *Id.* at pdf p. 7.

¹²⁸ *Id.* at pdf p. 6, 11.

¹²⁹ There is nothing in the definition of hazardous waste incinerators or Clean Harbors’ application showing that the processes in the proposed controlled burn chamber system are not “steady-state” or “near steady-state.”

wastes.”¹³⁰ As described above, however, the process occurring in the chamber is controlled flame combustion. EPA has explained that the presence of engineered burners like the kind Clean Harbors describes is not necessary to establish controlled flame combustion.¹³¹ Moreover, control of the operating temperature is not a defining factor of hazardous waste incineration.

In any event, Clean Harbors’ focus on just the contained burn chamber unit—one component of the complete proposed system—is inconsistent with the regulations, which explicitly consider the full system. 40 C.F.R. § 63.1201 (“the hazardous waste incinerator includes all associated firing systems and air pollution control devices, as well as the combustion chamber equipment”). EPA was clear to specify that all components of the system that affect emissions of toxic pollutants are relevant in determining whether the hazardous waste incinerator requirements apply:

In promulgating the HWC NESHAP Rule, we intended that the incinerator source include not only the combustion chamber, but also the waste firing system and the [air pollution control devices]. In order to provide safe treatment, other HAPs may require capture, additional treatment, and disposal. For hazardous waste incinerators, we regulate, through specific operating conditions and monitoring requirements, all aspects of the source that may affect emissions of [hazardous air pollutants] from the burning of hazardous wastes...Because the [air pollution control device] affects emissions of [hazardous air pollutants], e.g., dioxin/furan formation, toxic metals capture, acid gas removal, we consider the [air pollution control device] integral to the treatment process, and therefore, to the source as a whole.¹³²

Consideration of these other components is indeed the only logical way to determine the applicability of emissions regulations. Emissions from the contained burn chamber system are released into the atmosphere only after passing through all of the system’s components, including the contained burn chamber and the afterburner. Here, the emissions are released at one point: the stack at the very end of the CBCS, which is the relevant point of compliance and control. Clean Harbors’ interpretation of the hazardous waste incinerator regulations to focus solely on the contained burn unit ignores all relevant components of its proposed system and is unreasonably narrow and unsupported.

Regardless of whether the contained burn chamber unit uses controlled flame combustion, there can be no question that the afterburner/thermal oxidizer, which is integral to Clean Harbors’

¹³⁰ *Id.* at pdf p. 11; *see also id.* at pdf p. 5 (“The CBC does not use a controlled flame burner, and therefore the operating temperature is not controlled.”); LDEQ, Worksheet for Technical Review of Working Draft at pdf p. 5 (Oct. 27, 2022), EDMS Doc. No. 13516584, <https://edms.deq.louisiana.gov/app/doc/view?doc=13516584>.

¹³¹ EPA, RO 14238, Memorandum, Response to Questions from California Department of Toxic Substances Control Regarding Various Issues on the Combustion of Hazardous Waste, <https://rcrapublic.epa.gov/files/14238.pdf>.

¹³² EPA, NESHAPS: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors; Final Rule—Interpretive Clarification; Technical Correction, 65 Fed. Reg. 67,268, 67,269/1 (Nov. 9, 2000) (attached as Exhibit 8).

proposed treatment process, involves controlled flame combustion and is an incinerator.¹³³ By Clean Harbors' own description, the purpose of the afterburner is "to provide complete combustion of any partially reacted species, volatile or semi-volatile organic compounds or carbon monoxide."¹³⁴ Clean Harbors dismisses the relevance of the thermal oxidizer, claiming only that "it is an off-gas treatment device; no waste is introduced into the thermal oxidizer."¹³⁵ But the "off-gas" that is "treated" in the afterburner is directly derived from the hazardous wastes that are ignited and unavoidably combusted in the contained burn chamber and are still wastes subject to the hazardous waste incinerators standards. Indeed, EPA has already considered this issue and made clear that thermal oxidizers are part of the solid waste treatment process. In clarifying the application of the Subpart EEE requirements, EPA stated that air pollution control devices "of course, are also enclosed and so are part of the device preventing release of [hazardous air pollutants] until the end of the combustion process. These gases continue to be regulated, as is the [air pollution control device] itself. EPA, NESHAPS: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors; Final Rule—Interpretive Clarification; Technical Correction, 65 Fed. Reg. 67,268, 67,269/1 (Nov. 9, 2000).¹³⁶ It is unlawful and arbitrary to consider the contained burn chamber unit and afterburner separately, as both function together to treat, via burning, the hazardous wastes that are fed into the system. Whether the waste is introduced into the contained burn chamber unit first is irrelevant, as both are components of the system that must be considered in applying the hazardous waste incinerator requirements. 40 C.F.R. § 63.1201.

Likewise, the deactivation furnace, by Clean Harbors' own description, "uses the controlled flame combustion" and is an incinerator.¹³⁷ Clean Harbors attempts to distinguish this process by asserting that the deactivation furnace "is expected to operate at temperatures substantially lower than typical for an incinerator," and that "[t]he energetic material is activated without direct

¹³³ See Subpart X Applicability Letter at pdf p. 7 (explaining that the afterburner or "high-temperature thermal oxidizer" is part of the "Advanced Pollution Abatement System"); see also Clean Harbors Colfax, LLC, Revisions to the RCRA Hazardous Waste Permit Renewal Appl. Vol. II, Attachment 27 at 2 (pdf p. 505) (Aug. 2020), EDMS Doc. No. 12346329, <https://edms.deq.louisiana.gov/app/doc/view?doc=12346329> (referring to the device in its pollution abatement system as an afterburner).

¹³⁴ Clean Harbors Colfax, LLC, Revisions to the RCRA Hazardous Waste Permit Renewal Appl. Vol. II, Attachment 27 at 2 (pdf p. 505) (Aug. 2020), EDMS Doc. No. 12346329, <https://edms.deq.louisiana.gov/app/doc/view?doc=12346329> ("The purpose of the high temperature afterburner is to raise the temperature of the exhaust gases to provide complete combustion of any partially reacted species, volatile or semi-volatile organic compounds or carbon monoxide"). See also Subpart X Applicability Letter at pdf p. 7 (the afterburner is "a high-temperature unit designed to heat the CBC and [deactivation furnace] exhaust gas stream at temperature, residence time, and excess oxygen sufficient to ensure complete combustion of CO and HC").

¹³⁵ Subpart X Applicability Letter at pdf p. 7.

¹³⁶ This is consistent with EPA's long-standing position with respect to other combustors as well. See, e.g., EPA, Standards for Performance for New Stationary Sources and Emission Guidelines for Existing Sources, Municipal Waste Combustors, 60 Fed. Reg. 65,387, 65,391/1 (Dec. 19, 1995) ("[m]unicipal solid waste combustion includes the direct combustion of [municipal solid waste] or the combustion of [municipal solid waste] gases...").

¹³⁷ Subpart X Applicability Letter at pdf p. 11.

firing of the burners on the waste.”¹³⁸ However, even if accurate, these factors are not relevant in determining whether the system is a hazardous waste incinerator pursuant to the regulatory definitions. Combustion devices, like these, that are specifically used to treat hazardous wastes in this manner are incinerators, regardless of whether the temperature is “substantially lower than typical for an incinerator.” Notably, Clean Harbors does not, and cannot, define what “typical” temperatures are for incinerators since the selection of temperature is a device- and waste-specific design criterion selected to meet appropriate permit limits and level of destruction.

b. The draft permit unlawfully and arbitrarily excludes requirements applicable to hazardous waste incinerators.

Because the proposed system is a hazardous waste incinerator, it must be permitted as such, and compliance with all 40 C.F.R. 63 Subpart EEE and RCRA requirements must be required in the permit. 40 C.F.R. 63 Subpart EEE; 40 C.F.R. 264 Subpart O. LDEQ recognizes the general applicability of 40 C.F.R. 63 Subpart EEE, but the draft permit unlawfully and arbitrarily fails to include all hazardous waste incinerator standards and requirements. *See* Draft Permit V.A.10.

For example, for hydrogen chloride/chlorine, the draft permit sets an emissions limit of 32 parts per million by volume, combined emissions, expressed as a chloride equivalent, dry basis and corrected to seven percent oxygen. Draft Permit at V.A.10.d. However, the Subpart EEE emissions limit is 21 parts per million by volume combined emissions, expressed as a chloride equivalent, dry basis and corrected to seven percent oxygen. 40 C.F.R. § 63.1219(b)(6). The law does not allow Clean Harbors to emit more of this (or any other) toxic pollutant than Subpart EEE provides.¹³⁹ Clean Harbors must comply with the stricter, more protective standards in 40 C.F.R. 63 Subpart EEE. LDEQ offers no explanation for this deficiency.

Moreover, the draft permit impermissibly allows Clean Harbors to satisfy “alternative standards” for highly toxic pollutants—including mercury, lead, arsenic, cadmium, and chromium—when compliance with 40 C.F.R. 63 Subpart EEE standards is “not technically feasible.” *See* Draft permit provision V.A.10.g (allowing alternative standards for mercury, low-volatiles and semi-volatiles). As described, these “alternative standards” are to be “no less stringent than” Tier I-Tier III of 40 C.F.R. 266 Subpart H, which are the regulatory standards applicable to old boilers and industrial furnaces built before 2005.¹⁴⁰ But Clean Harbors does not even claim its system is a boiler or an industrial furnace; as explained, it is a hazardous waste incinerator and is thus subject to Subpart EEE, regardless of whether Clean Harbors claims such compliance is “not technically feasible.”

¹³⁸ *Id.*

¹³⁹ Hydrogen chloride is “corrosive to the eyes, skin, and mucous membranes” and acute exposure can cause irritation and inflammation to the eyes, nose, and respiratory tract. EPA, Hydrochloric Acid (Hydrogen Chloride) at 1-2 (Jan. 2000), <https://www.epa.gov/sites/default/files/2016-09/documents/hydrochloric-acid.pdf>; ATSDR, Hydrogen Chloride at 2 (April 2002), <https://www.atsdr.cdc.gov/toxfaqs/tfacts173.pdf>.

¹⁴⁰ 40 C.F.R. § 266.100 (stating that Subpart EEE standards apply to boilers and industrial furnaces after 2005 or once they have demonstrated compliance with Subpart EEE).

Under RCRA, LDEQ may impose stricter requirements and standards to protect human health and the environment, but there is no allowance for less stringent requirements. 42 U.S.C. §§ 6926(b), 6929. There has been no showing whatsoever that the 40 C.F.R. 266 Subpart H standards are more, or even as, protective of human health and the environment here compared to the 40 C.F.R. 63 Subpart EEE standards. In fact, neither LDEQ nor Clean Harbors have provided any evidence that the Subpart H standards are sufficiently protective of human health and the environment here at all. Nor can it make such a demonstration, as 40 C.F.R. 63 Subpart EEE standards are the standards that are specifically designed to safeguard human health and the environment from hazardous waste incinerator emissions.

The draft permit allows Clean Harbors to complete design of the system after this permit is issued, and then determine which standards it will meet (40 C.F.R. 63 Subpart EEE or old 40 C.F.R. 266 Subpart H). This defies RCRA and logic. The permit must state precisely which standards and requirements Clean Harbors shall meet and Clean Harbors must design its system accordingly to ensure compliance with the applicable standards.¹⁴¹ There is simply no basis for LDEQ to assume that Clean Harbors will later design its system to satisfy more stringent requirements if it is not required to do so.

Allowing Clean Harbors to complete design and establish the precise emissions standards after the permit is issued also circumvents RCRA's public participation and permitting requirements. The lack of complete design and process information thwarts the ability of the public to comment on all aspects of the proposed CBCS and its impacts on human health and the environment. By allowing Clean Harbors to provide this critical information after the permit is issued and public comment period is closed, LDEQ unlawfully and unfairly deprives affected communities of a full and meaningful opportunity to weigh in on the final system and the sufficiency of the standards applicable to it, and thus the permit. 42 U.S.C. § 6974; *see also* 40 C.F.R. § 25.3,.4. As EPA has explained, “[i]t is important to engage with communities on a site-specific basis on permitting activities for these facilities, to learn about citizens’ concerns and share information so that they can effectively participate in the permitting process, and so that permitting actions can fully consider and address issues that impact community health.”¹⁴²

LDEQ also improperly excuses Clean Harbors from compliance with other critical hazardous waste incinerator requirements in 40 C.F.R. 63 Subpart EEE and 40 C.F.R. 264 Subpart O that are necessary to protect human health and the environment. 40 C.F.R. § 264.340(b)(2) (stating that the MACT EEE standards do not replace “applicable requirements of subparts A through H” of 40 C.F.R. Part 264). For example, the draft permit lacks necessary 40 C.F.R. 63 Subpart EEE requirements for performance testing (40 C.F.R. § 63.1207), including recurring trial burn testing requirements for dioxins and furans, and continuous emissions monitoring systems (CEMS) and continuous opacity monitoring (40 C.F.R. § 63.1209).¹⁴³ As set forth in 40 C.F.R. 264 Subpart O, hazardous waste incinerators must comply with “applicable requirements of subparts A

¹⁴¹ 40 C.F.R. 270.32(a); LAC 33:V.703.C.3.d.

¹⁴² EPA Memo at 2.

¹⁴³ To the extent that the operating parameters listed in the draft permit (V.A.9) are meant to substitute for continuous monitoring requirements, there has been no showing that these parameters are adequate surrogates for the pollutants that must be monitored.

through H” in 40 C.F.R. Part 264,¹⁴⁴ as well as the requirements for closure at 40 C.F.R. § 264.351.¹⁴⁵ These requirements provide important protections against the potential mismanagement of hazardous wastes, including safeguards in the event of an emergency or lingering contamination after the facility ceases operations. The draft permit nonetheless omits several requirements in these subparts (and corresponding Louisiana hazardous waste law) and 40 C.F.R. § 264.35, including, as noted above, complete requirements for post-closure (40 C.F.R. 264 Subpart G); manifest system, recordkeeping, and reporting (40 C.F.R. 264 Subpart E); and financial requirements for post-closure care (40 C.F.R. 264 Subpart H). LDEQ must ensure that the permit includes all requirements in 40 C.F.R. 264 Subparts A through H; if certain requirements are not applicable, LDEQ must explain why. These failures also render the draft permit unlawful and arbitrary.

2. Application of Hazardous Waste Incinerators Requirements is Appropriate and Necessary to Protect Human Health and the Environment.

Even if the proposed CBCS is a “miscellaneous unit,” all 40 C.F.R. 63 Subpart EEE and RCRA hazardous waste incinerator standards and requirements are “appropriate” and “must” be included in the permit pursuant to Subpart X. 40 C.F.R. § 264.601. Inclusion of these requirements, as well as others discussed below, is necessary to ensure that the permit is protective of human health and the environment. *Id.*; 42 U.S.C. § 6925(c)(3).

Under 40 C.F.R. 264 Subpart X, all “miscellaneous units” “must be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment.” As defined,

Permits for miscellaneous units are to contain such terms and provisions as necessary to protect human health and the environment, including, but not limited to, as appropriate, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit. Permit terms and provisions must include those requirements of subparts I through O and subparts AA through CC of this part, part 270, part 63 subpart EEE, and part 146 of this chapter that are appropriate for the miscellaneous unit being permitted.

40 C.F.R. § 264.601 (emphasis added).

By explicitly referencing “subpart O” and “part 63 subpart EEE,” Subpart X makes clear that “miscellaneous units” that involve or resemble the burning of hazardous wastes are to comply with requirements applicable to hazardous waste incinerators.

¹⁴⁴ 40 C.F.R. § 264.340(b)(2) (stating that the MACT EEE standards do not replace “applicable requirements of subparts A through H” of 40 C.F.R. Part 264).

¹⁴⁵ 40 C.F.R. 264 Subpart O, 40 C.F.R. § 264.340(b)(2), states that the Subpart EEE standards do not replace the closure requirement at 40 C.F.R. § 264.351, which states that “[a]t closure the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the incinerator site.”

In promulgating the Subpart X regulations, EPA explained that where a “miscellaneous unit” resembles a regulated technology, as is the case here, “the appropriate requirements under the existing unit-specific subparts will be applied.”¹⁴⁶ If the permit applicant believes particular requirements for a regulated unit should not apply, the applicant must establish, by identifying the differences between the potential effects on human health and the environment, that modifications to existing requirements are appropriate for the permit.¹⁴⁷ In other words, where a miscellaneous unit resembles a hazardous waste incinerator, the standards for hazardous waste incinerators apply. If the permit applicant believes modifications to those requirements are not appropriate because the potential effects on human health and the environment are different, the applicant must prove it and justify the changes. Even if a unit does “not resemble another unit, the applicant must still address the unit’s effects on all media, and where appropriate, specific requirements applicable to other types of units will be added to the facility permit.”¹⁴⁸

Here, regardless of how it is defined, it is indisputable that Clean Harbors’ process in the proposed contained burn chamber system at least resembles hazardous waste combustion and incineration. Indeed, the process involves hazardous waste burning for treatment, and presents the same toxic pollution concerns for human health and the environment. Thus, it is only logical that the same pollution controls and safeguards that are necessary to protect human health and the environment against hazardous waste incinerators are “appropriate” and necessary to protect human health and the environment here. Clean Harbors fails to demonstrate otherwise. Clean Harbors makes no attempt to show that its proposed system is any different, let alone that it poses less risks than hazardous waste incinerators in terms of the potential effects on human health and the environment as required by 40 § C.F.R. 264.601.¹⁴⁹ In fact, Clean Harbors expressly admits that its system “may have some similarities to an incinerator” and generally accepts the applicability of hazardous waste incinerator requirements.¹⁵⁰

Contradicting itself, Clean Harbors also makes unsupported, cursory assertions that the CBCS “in no way resembles” a hazardous waste incinerator, and that Subpart H standards for old boilers and incinerators should apply instead of 40 C.F.R. 63 Subpart EEE standards. But there is no explanation whatsoever as to why it is “appropriate” and protective of human health and the environment to apply emissions limits in 40 C.F.R. 266 Subpart H for old (pre-2005) hazardous waste boilers and industrial furnaces, in lieu of 40 C.F.R. 63 Subpart EEE, which is explicitly referenced in Subpart X.¹⁵¹ To the contrary, Clean Harbors itself says that its contained burn

¹⁴⁶ EPA, Hazardous Waste Miscellaneous Units; Standard; Applicable to Owners and Operators, 52 Fed. Reg. 46,946, 46,951/3 (Dec. 10, 1987).

¹⁴⁷ *Id.* at 46,951.

¹⁴⁸ *Id.*

¹⁴⁹ “Since miscellaneous units are subject to site-specific design and operating requirements, RCRA requires that owners and operators applying for a permit provide the implementing agency with detailed information on unit design and potential environment impacts.” EPA, Requirements for Miscellaneous Hazardous Waste Units (last updated May 14, 2022), <https://www.epa.gov/hwpermitting/requirements-miscellaneous-hazardous-waste-units> [archived at <https://perma.cc/6SRM-T8SZ>].

¹⁵⁰ See Clean Harbors Colfax, LLC, Revisions to the RCRA Hazardous Waste Permit Renewal Application, Vol. I, at pdf p. 60 (Item 635) (Aug. 2020), EDMS Doc. No. 12346607, <https://edms.deq.louisiana.gov/app/doc/view?doc=12346607>.

¹⁵¹ See Draft permit at V.A.10.g.

chamber system is not an old boiler or industrial furnace.¹⁵² Importantly, even if Clean Harbors had shown that its system is more akin to a boiler or an industrial furnace, it would still be subject to 40 C.F.R. 63 Subpart EEE standards. Under Subpart H, boilers and furnaces built after 2005 must comply with Subpart EEE standards, not the standards for the old units. 40 C.F.R. § 266.100(b). There is no basis for applying the old standards in 40 C.F.R. 266 Subpart H to Clean Harbors' new unit.

Likewise, and as discussed above, there has been no demonstration that other important hazardous waste incinerator requirements are not "appropriate" and necessary to protect human health and the environment in this case. While Clean Harbors may have an interest in meeting fewer requirements and standards that were promulgated more than thirty years ago for old technologies, that is no justification for the permit. Without showing that the draft permit terms and conditions, which do not fully incorporate the hazardous waste incinerator requirements and standards, are appropriate and protective of human health and the environment, the draft permit does not satisfy Subpart X and cannot be issued.

3. Additional Requirements are Necessary to Protect Human Health and the Environment.

To ensure protection of human health and the environment, as required by RCRA, the draft permit provisions concerning the CBCS must include additional requirements and safeguards. 42 U.S.C. § 6925(c)(3). In reviewing the permit, LDEQ is required to "consider improvements in the state of control and measurement technology." *Id.*

Additional protections are particularly crucial considering Clean Harbors' long history of non-compliance, and the serious human health and environmental threats posed by Clean Harbors' hazardous waste burning. At a minimum, the draft permit must include enforceable emissions limits for other toxic pollutants (and/or classes of pollutants) that will be emitted from the proposed contained burn chamber system, including all hazardous or toxic VOCs, semi-VOCs, PCBs, mercury compounds, heavy metals, and acid gases, as well as conventional pollutants such as nitrogen oxide (NO_x), sulfur dioxide (SO₂), particulate matter (PM) (of various sizes) and carbon monoxide (CO). It is more than reasonable to expect the CBCS to release all of these pollutants as they are commonly associated with the burning of hazardous wastes. This is especially important given the broad and unspecified compositions of the wastes that Clean Harbors intends to burn in the system. For these pollutants, LDEQ must consider whether additional controls can be applied to lower emissions, including for example, Selective Catalytic Reduction (SCR) for NO_x, and sorbent injection with activated carbon for mercury. *See* 42 U.S.C. § 6925(c)(3) (permitting authorities must consider improvements in the state of control and measurement technology). Clean Harbors does not explain why these additional controls are absent from its proposed system, and there is simply no justification for excluding them to ensure the system reduces emissions to the greatest extent possible.

In addition, it is critical to include requirements for continuous emissions monitoring at the stack for all regulated pollutants, including metals, as well as the other pollutants of concern (noted

¹⁵² LDEQ, Worksheet for Technical Review of Working Draft at pdf p. 12-15 (Oct. 27, 2022), EDMS Doc. No. 13516584, <https://edms.deq.louisiana.gov/app/doc/view?doc=13516584>.

above) to ensure consistent compliance and protection of human health and the environment. By Clean Harbors' own description, the proposed system "is not equipped with any Continuous Emissions Monitors."¹⁵³ As discussed above, the operating parameters in the draft permit are not adequate surrogates for continuous emissions monitoring systems at the stack (which will provide real data about the releases from the system) and do not purport to ensure compliance with any regulated pollutants. At a minimum, CEMS for NO_x, SO₂, CO, VOCs, filterable PM₁₀, filterable PM_{2.5}, mercury, other metals, and acid gases such as hydrogen chloride and hydrogen fluoride must be required so that the emissions of these pollutants can be directly and continuously measured under all waste disposal conditions, and continuous protection of human health and the environment can be assured. For other hazardous air pollutants like dioxins/furans, if CEMS cannot be used, parametric monitoring that can clearly and at all times establish whether Clean Harbors is in or out of compliance should be required. It is also imperative that all monitoring data be available to the public in accessible formats so that affected communities may track compliance and protect themselves against pollution threats.

III. CONCLUSION

Given the significant legal defects in the draft permit, LDEQ must promptly deny Clean Harbors' application for a renewed hazardous waste permit. Should Clean Harbors wish to conduct OB/OD and construct the proposed CBCS, it may reapply for a new hazardous permit that complies with the law and protects human health and the environment. In the meantime, there is no justification for continuing to endanger communities with Clean Harbors' toxic operations.

Respectfully submitted,

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**Contributed to the scientific, research, and/or factual portions of this document, and did not provide legal services or analysis*

¹⁵³ Clean Harbors Colfax, LLC, Additional Revisions to Responses to NOD #1 at pdf p. 319 (Continuous Monitoring System Performance Evaluation Test Plan) (Apr. 2022), EDMS Doc. No. 13216557, <https://edms.deq.louisiana.gov/app/doc/view?doc=13216557>.